

EMS Current and Proposed Resources Objectives and Targets
Presentation to ESC Board November 27, 2001 (Revised 1-16-02 for current resources only)

Significant Environmental Aspect/Targets	Current Resources	Proposed Additional Resources
Air Emissions (from stationary sources)		
a. 100% compliance with all applicable Air Emission regulations.	a. 4 hrs./year	a. None
b. Gather and formalize baseline data on the amount and type of pollutants being released to the air within one year of formal EMS program acceptance.	b. None	b. Group Leader 10 hrs./month for 12 months = 120 hrs. 3-5 person Wkgrp. 5 hrs./month for 12 months = 300 hrs. Total = 420 hrs.
c. Determine whether opportunities exist to implement strategies to reduce facility/laboratory air emissions within six months of finalizing the baseline air emissions data.	c. None	c. Group Leader 10 hrs/month for 6 months = 60 hrs. 3-5 person Wkgrp. 5 hrs/month for 6 months = 150 hrs. Total = 210 hrs.
d. Increase the awareness and involvement of ESC employees by conducting activities such as posting information, conducting training sessions and holding brown bag lunches on selected facility/laboratory activities that result in the release of pollutants to the air within six months of finalizing strategy to reduce air emissions.	d. None	d. 3-5 person Wkgrp. 10 hrs. Total hours = 50 hrs. Ongoing - 1 Leader 4 hrs./year
Fuel Consumption (heating oil, natural gas)		
a. 100% compliance with CAA requirements regarding type (sulfur content), amount, and use of fuel	a. Facility Manager - 10 hrs./year	a. None
b. Establish a mechanism for the review of heating oil and natural gas consumption in conjunction with changes to HVAC management (e.g., air handling volumes, heating conditions, installation of smaller boiler) within six months of EMS acceptance. Correlate consumption of heating oil and natural gas with the energy reduction program to ensure that consumption of heating oil and natural gas does not increase substantially as HVAC management changes are implemented.	b. None	b. 1 Group Leader 6 hrs. 3-5 person Wkgrp. 4 - 1 hour meetings = 20 hrs. Total = 26 hrs.

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c. Maintain and promote awareness and involvement of ESC staff regarding the impacts related to consumption of heating oil and natural gas through activities such as annual reports, staff meetings, reports to the ESC Board, e-mail, and posting information.	c. Facility Manager - 2 hrs./quarter = 8 hrs./year	c. None
Energy Consumption (electricity)		
a. Reduce ESC's energy demand to contribute to the EO for the Agency's commitment of 30% reduction from base year by 2006. Identify energy use areas and ways to reduce consumption within 6 months of system review surveys.	a. Facility Manager - (30-50% of time) 1,000 hrs./year Coordinate w/ESC managers and staff	a. Minimal
b. Maintain and promote awareness and involvement of ESC staff regarding the impacts related to consumption of electricity through activities such as annual reports, staff meetings, reports to the ESC Board, e-mail, and posting information.	b. Facility Manager - 4 hrs/ year	b. None
Fuel Consumption of Mobile Sources and Exhaust Emissions Associated with Their Use		
a. Determine specific legal requirements, the extent to which the ESC is in compliance, and needed steps to achieve compliance within 9 months of EMS acceptance.	a. None	a. 1 Leader 5 hrs./month for 9 months = 45 hrs.
b. Integrate EO requirements into compliance requirements overall management strategy that will achieve reductions in fuel consumption/exhaust. Implement overall strategy within six months of completing compliance review.	b. None	b. 1.Group Leader 10 hrs. 2-3 person Wkgp. 5-1 hr. meetings = 15 hrs. Total = 30 hrs.
c. Maintain and promote awareness and involvement of ESC staff regarding the impacts related to fuel consumption of mobile sources and exhaust emissions associated with their use through activities such as annual reports, staff meetings, reports to the ESC Board, e-mail, and posting information.	c. Minimal	c. 1 Leader 6 hrs./quarter = 24 hrs./year

Significant Environmental Aspect/Targets	Current Resources	Proposed Additional Resources
Chemical Resources (purchase, storage, handling, and management up to point of use)		
a. 100% compliance with Federal and State regulations	a. SHEM Manager - 200 hrs./year Building-wide - 600 hrs./year	a. None
b. Develop strategy per Executive Orders for source reductions and substitutions of existing chemical resources within 12 months of acceptance of the EMS program (See EOs 12873 and 13148). Strategy to include procedures to ensure least operable quantity of chemicals are kept in inventory and that all unusable/expired chemicals are disposed of in a timely manner. Implement strategies including increase employee awareness of specific activities that have been identified to reduce use of chemical resources and to substitute less hazardous chemicals with more environmentally friendly chemicals within 6 months of strategy development.	b. None	b. (Sub-committee of Waste Committee) Group Leader 3 hrs./month for 12 months = 36 hrs. 1-2 person Wkgrp. 2 hrs/month for 12 months = 48 hrs. Total = 84 hrs. Strategy implementation - To be determined
Radiation		
a. Maintain current system for 100% NRC compliance including checking equipment for radioactive leaks and monitoring ESC employees for radiation exposure.	a. SHEM Manager 50 hrs./year Building-wide 50 hrs./year	a. None
b. Check 100% of incoming environmental samples for radioactive contamination	b. 25 hrs./year	b. None
Paper Consumption		
a. Develop strategy to reduce paper consumption while increasing the recycled content and the percentage of paper recycled per Executive Orders 13148 and 13101 and other applicable EPA Directives within nine months of formal EMS acceptance. Strategy to incorporate baseline data on volume and type of paper purchased, volume recycled and specific suggestions for improvement in the rate of paper recycled such as increase the number of colored paper recycle bins.	a. None	a. Group Leader 5 hrs./month for 9 months = 45 hrs. 2-3 person Wkgrp. 4 hrs./month for 9 months = 108 hrs. Total = 153 hrs.

Significant Environmental Aspect/Targets	Current Resources	Proposed Additional Resources
Water Consumption		
a. Establish a mechanism for the review of water consumption in conjunction with changes to HVAC management (e.g., air handling volumes, heating conditions, installation of smaller boiler) within six months of EMS acceptance. Correlate consumption of water with the energy reduction program to ensure that consumption of water does not increase substantially as HVAC management changes are implemented.	a. None	a. Included in proposed additional resources under Target b. of Fuel Consumption (heating oil, etc.)
b. OASQA and OPPTS write Standard Operating Procedures or equivalent that specifies how to use Autoclaves, DI Water System, and Dishwashers with minimal water consumption within 90 days of formal EMS acceptance. Conduct meeting to discuss best practices within 60 days of formal EMS acceptance.	b. None	b. 1 person each OASQA and OPPTS 40 hrs. Total = 80 hrs.
c. Maintain and promote awareness and involvement of ESC staff regarding the impacts related to water consumption through activities such as annual reports, staff meetings, reports to the ESC Board, e-mail, and posting information.	c. Included in current resource under Target c. of Fuel Consumption (heating oil, etc.)	c. None
Wastewater Discharge		
a. 100% compliance with all applicable regulations regarding the discharge of wastewater to the Ft. Meade sewer system.	a. SHEM Manager - 20 hrs./year	a. None
b. Annually sample and test the lab and combined (lab+facility) wastewater streams for pollutants to identify trends that may indicate the need for additional controls.	b. SHEM Manager - 20 hrs./year Samplers - 8 hrs./year Lab costs \$10000/yr	b. None

Significant Environmental Aspect/Targets	Current Resources	Proposed Additional Resources
Waste Generation		
a. 100% compliance with waste disposal regulations.	a. SHEM Manager - (25%) 500 hrs./year Waste Disposal contract - \$90K/year Building-wide - 2,500 hrs./year	a. None
b. No deviations from the CHP, SPCCP, and OEP each year.	b. SHEM Manager - 20 hrs./year Building-wide - 150 hrs./year	b. None
c. Perform root-cause analysis of spill incidents to find opportunities to prevent future spills (i.e. Safety Committee) within 30 days of spills.	c. Minimal	c. To be determined
d. Within 6 months of EMS acceptance, determine base amounts for recycled materials, hazardous waste and non-hazardous waste. Develop strategy to implement opportunities for waste reduction within six months of determining base amounts.	d. None	d. Data gathering - 1 Group Leader 8 hrs. 2-3 person Wkgrp. 3 - 2 hr meetings = 18 hrs. Total = 26 hrs. Strategy development - 1 Group Leader 15 hrs. 2-3 person Wkgrp 6 - 2 hr. meetings = 36 hrs. Total = 51 hrs. Total for d. = 77 hrs.
e. Maintain and promote awareness and involvement of ESC staff regarding the impacts related to waste generation through activities such as annual reports, staff meetings, reports to the ESC Board, e-mail, and posting information.	e. Facility Manager and SHEM Manager - minimal Building-wide - minimal	e. Leader 4 hrs./year

Significant Environmental Aspect/Targets	Current Resources	Proposed Additional Resources
Storm Water Discharge		
a. 100% compliance with all applicable storm water regulations.	a. Facility Manager - 4 hrs./year (contractor function)	a. None
b. Maintain the operating condition of the storm water collection system including the containment pond to ensure the capacity exists to process storm water.	b. Facility Manager - 4 hrs./year (contractor function)	b. None
c. When planning and designing any construction events, evaluate possible storm water management technologies and implement those with the best cost-benefit performance.	c. None	c. To be determined
Microbial Contamination (Not a Significant Aspect)	0	0
Noise (Not a Significant Aspect)	0	0
GRAND TOTALS	5,041 hrs./year	1,175 hrs. over ~18 months 32 hrs./year ongoing

Note:

Current and additional resources do not include EMS Implementation Workgroup time

SUMMARY OF CURRENT AND PROPOSED ADDITIONAL RESOURCE REQUIREMENTS

Significant Environmental Aspect	Current Resources	Proposed Additional Resources
Air Emissions (from stationary sources) ³	4 hrs./year	684 hrs.
Fuel Consumption (heating oil, natural gas) ²	18 hrs./year	26 hrs.
Energy Consumption (electricity) ¹	1,004 hrs./year	0 hrs.
Fuel Consumption of Mobile Sources and Exhaust Emissions Associated with Their Use ³	0 hrs.	99 hrs.
Chemical Resources (purchase, storage, handling, and management up to point of use) ²	800 hrs./year	84 hrs.
Radiation ¹	125 hrs./year	0 hrs.
Paper Consumption ³	0 hrs.	153 hrs.
Water Consumption ²	0 hrs. (included in Fuel Consumption)	80 hrs.
Wastewater Discharge ¹	48 hrs./year	0 hrs.
Waste Generation ²	3,170 hrs./year	81 hrs.
Storm Water Discharge ¹	8 hrs./year	0 hrs.
Grand Totals	5,177 hrs./year	1,207 hrs.

Notes:

¹ Existing program - no additional resources needed

² Expansion of existing program - minimal additional resources needed

³ New program - significant additional resources needed

EMS Proposed Additional Resources

